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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,714	09/22/2000	Takeo Kojima	001168	9942
38834	7590	06/16/2004		
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			EXAMINER PARK, CHAN S	
			ART UNIT 2622	PAPER NUMBER

DATE MAILED: 06/16/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/667,714

Applicant(s)

KOJIMA ET AL.

Examiner

CHAN S PARK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 3/30/04, and has been entered and made of record. Currently, **claims 1-6** are pending.
2. Applicant made some grammatical changes to **claims 1 and 3** without changing the substance of the claims.

Drawings

3. The corrected or substitute drawings were received on 3/30/04. These drawings are acceptable.

Response to Arguments

4. Applicant's arguments filed 3/30/04 have been fully considered but they are not persuasive.

In response to applicant's arguments regarding the rejection of claim 1, wherein on pages 6 and 7, the applicant explains how the current invention differs from the teachings of Garr. Particularly, the applicant states that the current invention has a feature of storing a total print copy number updated each time a prescribed number of print copies are made. Furthermore, the applicant shows fig. 4(d) as example to show the difference and support the arguments. However, this difference is not apparent in the current claim wording. It is apparent that the Garr printer or any conventional printer performs a print job based on commands inputted by a user. Thus, referring to fig. 7 of Garr, each time prescribed or defined print job, which inherently includes the user's

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prescribed number of print copies or pages, is performed by the printer, "pages printed 516" is updated (col. 18, lines 50-52). Also, see col. 2, lines 65-67

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., example show in fig. 4(d) on page 7, lines 7-10) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, Garr teaches and discloses the feature of storing a total print copy number updated each time a prescribed number of print copies are made.

5. In response to applicant's arguments regarding the rejection of claim 1, wherein on pages 7 and 8, the applicant explains how the current invention differs from the teachings of Garr and Sekizawa. Particularly, the applicant states that Sekizawa does not teach a feature of storing a total printing time updated each time a prescribed printing time period has elapsed. However, Sekizawa can still be interpreted to show this particular limitation. Since the applicant fails to particularly point out and distinguish what a *prescribed printing time period* is in the claim, the Office interprets that each prescribed printing time period as one day determined by the user (55e in fig. 42a) and total printing time as the past five days according to fig. 42a (col. 41, lines 43-44 & col. 42, lines 3-18). Such an interpretation is valid since the printer performs printing process during those five days and keeps a record each day.

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Therefore, Sekizawa teaches and discloses the feature of storing a total print time updated each time a prescribed printing time period has elapsed.

Also, see col. 14, lines 34-41 of Garr.

6. In response to applicant's arguments regarding the rejection of claims 2 and 4, wherein on pages 8 and 9, the applicant explains how the current invention differs from the teachings of Garr and Sekizawa. Particularly, the applicant states that Garr fails to disclose the feature of updating the subsequent replacement schedule copy number for said component as stored in said non-volatile memory to a value obtained by adding a lifespan copy number previously determined for said component to the total print copy number at the time of replacement. However, the Examiner believes that Garr clearly teaches such a feature in col. 2, lines 61-67 & col. 12, line 63 – col. 13, line 8. The cited columns state that the lifespan of the toner is predicted based on the most recent or previous history of toner usage.

With respect to arguments regarding the rejection of claim 4, arguments analogous to those presented above since Garr uses the most recent history of toner usage to predict the number of days before the toner cartridge runs out (col. 14, lines 34-41).

7. Therefore, the rejection of claims 1-4, as cited in the Office action dated 1/2/04 is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Garr et al. U.S. Patent No. 5,802,420.

1. With respect to claim 1, the Garr et al. reference discloses an image forming apparatus (laser printer 10) containing a plurality of replaceable components (toner and papers), comprising:

a non-volatile memory (EEPROM) for storing a total print copy number (pages printed 516 in fig. 7) updated each time a prescribed number of print copies are made (col. 18, lines 50-52), and a subsequent replacement schedule copy number for each component (col. 18, lines 15-30); and

a controller (printer) for judging the lifespan of each component (toner) on the basis of a comparison between said total print copy number and said subsequent replacement schedule copy number of each component (col. 10, lines 55-60 and fig. 7).

Since the prediction is made based on the previous printing history, it is inherent that the history must be saved in a non-volatile memory to recall the printing history information. Therefore, the presence of a non-volatile memory in the Garr et al. apparatus is inherent.

Moreover, It is apparent that the Garr printer or any conventional printer performs a print job based on commands inputted by a user. Thus, referring to fig. 7 of Garr, each time prescribed or defined print job, which inherently includes the user's prescribed number of print copies or pages, is performed by the printer, "pages printed 516" is updated (col. 18, lines 50-52). Also, see col. 2, lines 65-67

2. With respect to claim 2, the Garr et al. reference further discloses the image forming apparatus wherein, when one of the components is replaced, the subsequent replacement schedule copy number for said component as stored in said non-volatile memory is updated to a value obtained by adding a lifespan copy number previously determined for said component to the total print copy number at the time of replacement (col. 2, lines 61-67 & col. 12, line 63 – col. 13, line 8).

3. With respect to claim 5, the Garr et al. reference further discloses the image forming apparatus wherein said component is a print unit, a toner cartridge, a fixing unit, or a belt (toner in col. 10, lines 40-54).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garr et al. in further view of Sekizawa et al. U.S. Patent No. 6,430,711.

4. With respect to claim 3, as noted in claim 102(b) rejection for claim 1, the Garr et al. reference discloses an image forming apparatus (laser printer 10) containing a plurality of replaceable components (toner and papers), comprising:

a non-volatile memory (EEPROM) for storing a total print copy number (pages printed 516 in fig. 7) updated each time a prescribed number of print copies are made (col. 18, lines 50-52), and a subsequent replacement schedule copy number for each component (col. 18, lines 15-30); and

a controller (printer) for judging the lifespan of each component (toner) on the basis of a comparison between said total print copy number and said subsequent replacement schedule copy number of each component (col. 10, lines 55-60 and fig. 7).

Since the prediction is made based on the previous printing history, it is inherent that the history must be saved in a non-volatile memory to recall the printing history information. Therefore, the presence of a non-volatile memory in the Garr et al. apparatus is inherent.

The Garr et al. reference does not expressly disclose if the apparatus can store a total printing time updated each time a prescribed printing time period has elapsed and judge the lifespan of each component on the basis of a comparison between said total printing time and a subsequent replacement schedule time period of each component.

The Sekizawa reference discloses a printer status information request system for retrieving a total printing time updated each time a prescribed printing time period has elapsed (previous ink remaining amount in col. 41, lines 44-64 and a history of the toner or ink remaining amounts in col. 42, lines 9-10), and a subsequent replacement schedule time period (dashed line in col. 42, lines 3-23) for each component (consumable remaining amount in col. 41, line 38).

It further teaches a method of judging the lifespan of each component on the basis of a comparison between said total printing time and said subsequent replacement schedule time period of each component (col. 42, lines 3-23 and figs. 40-42).

Garr et al. and Sekizawa are analogous art because they are from the same field of endeavor that is the retrieving consumable remaining amount information and predicting the lifespan of the consumable amount.

At the time the invention, it would have been obvious tot a person of ordinary skill in the art to implement the Sekizawa system of retrieving the history of the toner remaining amount to the Garr et al. apparatus of predicting the lifespan of the each component.

The motivation for doing so would have been to predict the time the consumable amounts would become empty.

Therefore, it would have been obvious to combine Garr et al. to Sekizawa to obtain the invention as specified in claim 3.

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5. With respect to claim 4, both Garr et al. teaches when one of the components is replaced, the subsequent replacement schedule time period for said component as stored in said non-volatile memory is updated to a valued obtained by adding a lifespan time period previously determined for said component to the total printing time at the time of replacement(col. 14, lines 34-41).

Garr uses the most recent history of toner usage to predict the number of days before the toner cartridge runs out (col. 2, lines 61-67 & col. 12, line 63 – col. 13, line 8).

6. With respect to claim 6, the Sekizawa reference discloses the image forming apparatus wherein the component is a print unit, a toner cartridge, a fixing unit, or a belt (col. 26, lines 41-44).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAN S PARK whose telephone number is (703) 305-2448. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

csp
June 8, 2004

Chan S. Park
Examiner
Art Unit 2622


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